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None

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UK CL (Edition J) E2X, F2K
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(54) Door wedge

(57) A door or window wedge 10 comprises a hollow body 12 moulded from hard, slightly flexible PVC and a nylon top plate which provides an upper wedging surface having far less frictional resistance than the basal surface.

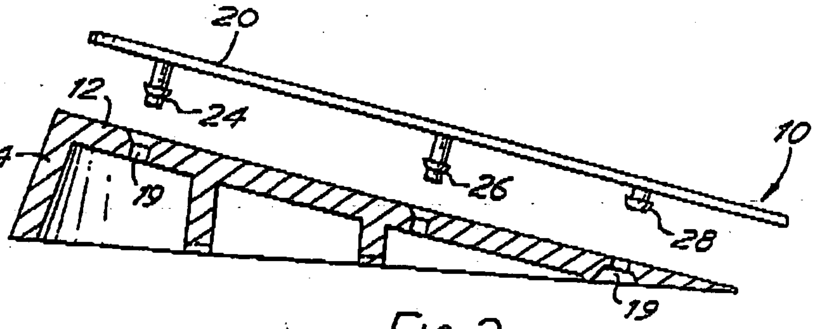

FIG. 2

At least one drawing originally filed was informal and the print reproduced here is taken from a later filed formal copy.

The claims were filed later than the filing date within the period prescribed by Rule 25(1) of the Patents Rules 1982.

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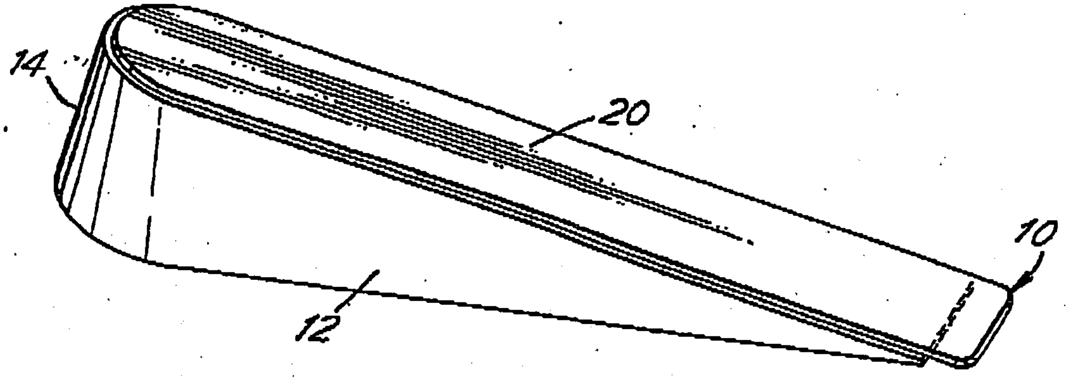

FIG.1

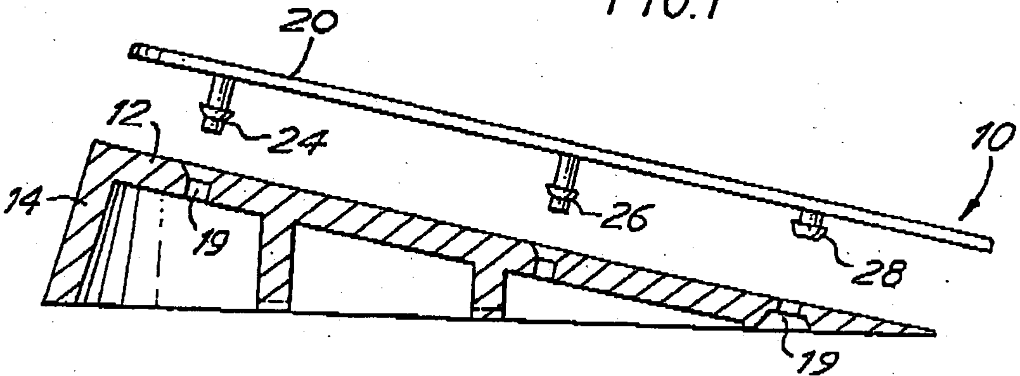

FIG.2

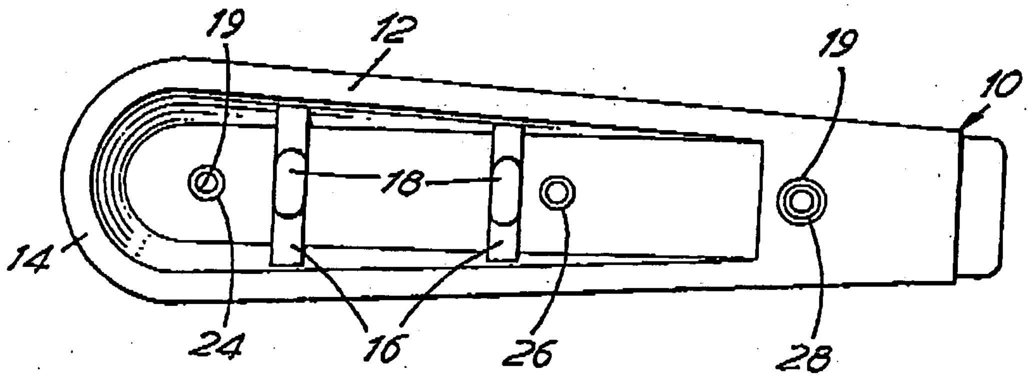

FIG.3

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DOOR OR LIKE WEDGES

This invention relates to wedges of the type that are used for such purposes as holding open a door at a desired position, preventing a sash window from rattling or for temporarily securing a door or window in a closed position when the normal fastening is faulty.

When a conventional wedge is used for retaining a door in a desired open position it tends to slide along the floor as the door is closed onto it, unless it is temporarily held in position by the hand or foot.

According to the present invention this disadvantage is overcome by the provision of a wedge in which one of the wedging surfaces offers greater frictional resistance than the other surface. Such a wedge is used with the surface offering the greater frictional resistance placed on the floor, and where the wedge is formed with a defined base and upper surfaces it is, of course, the basal surface which presents greater frictional resistance. When a door is closed (or opened) onto a wedge according to the present invention the smooth inclined upper surface allows the leading bottom edge of the door to travel more freely therealong, until a firmly wedged position is reached, than in the case of a conventional wedge, thus minimising any tendency for the wedge to be pushed along the floor, and rendering it unnecessary to hold the wedge in position.

Although the wedge according to the invention may be made from a single material with one or both of the wedging surfaces being treated to achieve differential frictional resistance, for example the roughening of one surface and/or the polishing of the other surface, or the application of a rough and/or smooth coating to the respective surfaces, it is preferred that the wedge be of two-part construction. For example the wedge may comprise a base formed of a material that inherently presents a surface having high frictional resistance, for example, rubber, PVC, cork or EVA, and a top plate formed of a hard material presenting a smooth surface, such as a suitable plastics material, steel or another metal or alloy, glass or ceramic material.

In alternative constructions the upper surface may be presented by the body of the wedge with the basal surface being provided by inserts, for example rubber feet, or by a strip of non-slip material secured to the underside of the body.

Although the upper wedging surface is generally continuous, the base surface may be discontinuous.

Clearly the invention may be carried out in a great variety of ways, but one particular embodiment thereof will now be described by way of example, with reference to the accompanying drawings in which

Figure 1 is an isometric projection of a door wedge according to the invention,

Figure 2 is an exploded longitudinal section along the centre line of the wedge of Fig. 1, and,

Figure 3 is an underside plan of the wedge of Fig. 1.

As shown in the drawings a wedge 10 comprises a hollow body 12 moulded from hard, slightly flexible PVC material and having a rounded outer end 14 and two transverse webs 16 each formed with a central foot 18. The upper portion of the base is formed with three apertures 19.

A top plate 20 which presents a very smooth upper surface is moulded from nylon integrally with two longer studs 24,26 and one shorter stud 28, which are snap fitted into the respective apertures 19 to assemble the wedge 10.

It will be noted from Fig. 1 that the thin end of the wedge 10 is formed by the plate 20 only, thus ensuring not only that the most vulnerable part is formed of the tougher material, but also that the wedge 10 can be used in very narrow gaps.

To hold a door open at a desired position the wedge 10 is simply positioned at the appropriate place on the floor and the door closed onto it. As the bottom edge of the door slides along the smooth inclined face of the nylon top plate 20 much less friction is encountered than between the basal surface and the floor. Consequently the wedge 10 stays in its initial position. Moreover, as there is less friction between the edge of the door and the upper surface of the wedge 10 than that of a conventional wedge a greater proportion of the horizontal movement of the door is resolved into a downward component, thus increasing the frinction between the wedge 10 and the floor. Furthermore, the door 10 will tend to travel relatively further along the inclined upper surface of the wedge 10 which, in the final position, will thus be pressed harder against the floor.

It will be appreciated that the wedge 10 need not necessarily be used in a horizontal attitude as described above but will function at any attitude or angle.

In an unillustrated embodiment the upper surface of the wedge is not planer but has an undulating serrated or stepped profile so as to achieve a ratchet effect; for example the upper surface of the wedge may have for the first 2.5 cm from its thin end an initial incination of 11° leading to a radius portion sloping downwardly at 45° or to a face normal to the under surface; the above described step may be repeated at intervals of, say, 1.25 or 0.675 cm.

In a further embodiment for use on a smooth floor the underside of the wedge may be equipped with one or more suction discs.

In a yet further embodiment the smooth upper surface of the wedge is provided by a centrally-disposed rigid element, which may have a rounded cross-section and which is mounted on resilient material and flanked by material having greater frictional resistance. As the door edge presses along the rigid element the element is forced downwardly such that in the final wedging position the door edge is also engaged by the frictional flanking material. The flanking material and the material having great frictional resistance may of course be the same and form the body of the wedge.

CLAIMS:

1. A wedge in which one of the wedging surfaces offers greater frictional resistance than the other wedging surface.

2. A wedge as claimed in claim 1, in which said one wedging surface is provided by a material that inherently presents a surface having a greater frictional resistance than the material providing the other wedging surface.

3. A wedge as claimed in claim 1, in which the material providing said one wedging surface is selected from rubber, PVC, cork and EVA.

4. A wedge as claimed in claim 1 or 2, in which the material providing said other wedging surface is selected from plastics materials, metals, alloys, and glass and ceramic materials.

5. A wedge as claimed in any preceding claim, in which the material providing said other wedging surface is in the form of a plate.

6. A wedge as claimed in any pr ceding claim, in

which the material providing said other wedging surface is in the form of a resiliently mounted element which is depressable relative to, and flanked by, a surface offering greater frictional resistance.

7. A wedge as claimed in any preceding claim, in which said one wedging surface is provided by a material in the form of inserts, feet, suction discs, or a strip of non-slip material.

8. A wedge as claimed in claim 1 and formed of a single material, one or both of the wedging surfaces being treated to achieve differential frictional resistance.

9. A wedge as claimed in claim 8, in which the surface or surfaces are treated by polishing, roughening or coating.

10. A wedge as claimed in any preceding claim, in which the basal surface is discontinuous.

11. A wedge as claimed in any preceding claim, in which said other wedging surface has an undulating, serrated or stepped profile which provides, in use, a ratchet effect.

12. A wedge as claimed in claim 1 and substantially as herein described.

13. A wedge substantially as herein described with reference to the accompanying drawings.

14. The features as herein disclosed, or their equivalents, in any novel patentable selection.

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